

WHAT IS CLAIMED IS:

1. An arm assembly for a crash test dummy, comprising:

an upper arm unit of which an upper portion is connected to a body of a crash test dummy;

5 a lower arm unit pivotally connected to a lower portion of the upper arm unit;

a wrist joint of which a first end is rotatably connected to the lower arm unit;

and

a hand unit pivotally connected to a second end of the wrist joint,

wherein the upper arm unit comprises:

10 a housing; and

a driving device disposed in the housing for driving the lower arm unit.

2. The arm assembly of claim 1, wherein the driving device comprises:

a motor; and

15 a gear unit that is driven by the motor, the gear unit configured to drive the

lower arm unit to undergo pivotal motions.

3. An arm assembly for a crash test dummy comprising:

20 an upper arm unit of which an upper end portion is connected to a body of a crash test dummy;

a lower arm unit pivotally connected to a lower end portion of the upper arm unit;

a wrist joint of which a first end is rotatably connected to the lower arm unit;

and

25 a hand unit pivotally connected to a second end of the wrist joint,

wherein the hand unit is configured to grasp a steering wheel of a vehicle and to be separated from the steering wheel by a force.

4. The arm assembly of claim 3, wherein the hand unit comprises:

30 a first plate and a second plate that are disposed to face each other;

a first connecting rod coupled respectively to the first and second plates, the wrist joint being pivotally connected to the first connecting rod;

a second connecting rod coupled respectively to the first and second plates such that the second connecting rod restricts pivotal motions of the wrist joint with respect to the first connecting rod;

a first finger unit pivotally coupled to the first and second plates;

5 a second finger unit pivotally coupled to the first and second plates, and the second finger unit being connected to the first finger unit such that the second finger unit moves together with the first finger unit; and

an elastic member biasing the first finger unit so that the first finger unit and the second finger unit are in a grasping state.

10 5. The arm assembly of claim 4, wherein the hand unit further comprises a third connecting rod connected respectively to the first and second plates such that the third connecting rod restricts a pivotal motion of the first finger unit.

15 6. The arm assembly of claim 4, wherein the hand unit further comprises a fourth connecting rod connected respectively to the first and second plates such that the fourth connecting rod restricts a pivotal motion of the second finger unit.

20 7. The arm assembly of claim 4, wherein the elastic member is a coil spring.

25 8. An arm assembly for a crash test dummy, comprising:  
an upper arm unit connected to a body of the crash test dummy;  
a lower arm unit pivotally connected to a lower portion of the upper arm unit;  
a wrist joint of which a first end is rotatably connected to the lower arm unit;  
and

30 a hand unit rotatably connected to a second end of the wrist joint,  
wherein the upper arm comprises:  
a housing; and  
a driving device disposed in the housing and driving the lower arm unit,  
and wherein the hand unit is configured to grasp a steering wheel of a vehicle  
and to be separated from the steering wheel by a force.

9. The arm assembly of claim 8, wherein the driving device comprises:  
a motor; and  
a gear unit that is driven by the motor, the gear unit configured to drive the  
lower arm unit to undergo pivotal motions.

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10. The arm assembly of claim 8, wherein the hand unit comprises:  
a first plate and a second plate that are disposed to face each other;  
a first connecting rod coupled respectively to the first and second plates, the  
wrist joint being pivotally connected to the first connecting rod;  
10 a second connecting rod coupled respectively to the first and second plates such  
that the second connecting rod restricts pivotal motions of the wrist joint with respect to  
the first connecting rod;  
a first finger unit pivotally coupled to the first and second plates;  
a second finger unit pivotally coupled to the first and second plates, and the  
15 second finger unit being connected to the first finger unit such that the second finger  
unit moves together with the first finger unit; and  
an elastic member biasing the first finger unit so that the first finger unit and the  
second finger unit are in a grasping state.

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11. The arm assembly of claim 10, wherein the hand unit further  
comprises:  
a third connecting rod connected respectively to the first and second plates such  
that the third connecting rod restricts a pivotal motion of the first finger unit; and  
a fourth connecting rod connected respectively to the first and second plates  
25 such that the fourth connecting rod restricts a pivotal motion of the second finger unit.

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12. An arm assembly for a crash test dummy, comprising:  
an upper arm unit connected to a body of a crash test dummy;  
a lower arm unit pivotally connected to a lower portion of the upper arm unit;  
a hand unit; and  
a wrist joint connecting the lower arm unit and the hand unit together,  
wherein a circular recession is formed on an outer periphery of a first end

portion of the wrist joint, a cylindrical recession is formed in the lower arm unit, a circular protrusion is formed along an inner periphery of the cylindrical recession, and the first end of the wrist joint is inserted into the cylindrical recession such that the circular recession is fitted into the circular protrusion.

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13. The arm assembly of claim 12, wherein the hand unit comprises a first plate and a second plate that are disposed to face each other, a circular plate having a through hole formed in a center portion thereof is provided in a second end of the wrist joint, the circular plate is disposed between the first and second plates, and the circular  
10 plate is connected to the first and second plates through a connecting rod that is rotatably inserted into the through hole.

14. The arm assembly of claim 13, wherein a friction member is disposed between the circular plate of the wrist joint and the first and second plates of the hand  
15 unit.